

MERIDEN ROCK CREEK BRIDGE
MERIDEN VICINITY
JEFFERSON COUNTY
KANSAS

HAER No. KS-2

HAER
KANS,
44-MERIV,
1-

PHOTOGRAPHS

WRITTEN HISTORIC AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
NATIONAL ARCHITECTURAL and ENGINEERING RECORD
NATIONAL PARK SERVICE
DEPARTMENT of the INTERIOR
WASHINGTON, D.C. 20243

HAER
KANS,
44-MERLV,
1-

HAER No. KS-2

Page 1

HISTORIC AMERICAN ENGINEERING RECORD

Meriden Rock Creek Bridge

HAER No. KS-2

Location:	Spanning Rock Creek, $\frac{1}{2}$ mile north and 1 mile east of Meriden, Kansas
	UTM: 4341430 N 279380 E Quad: Meriden
Date of Construction:	Estimated 1870's.
Present Owner:	Jefferson County County Courthouse Oskaloosa, Kansas
Present Use:	Vehicular bridge.
Significance:	Wrought iron bowstring arch.
Photographs:	13 photographs accompany this report.
Historian:	Larry Jochims, September 1980

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM

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Page 2

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC

Meriden Rock Creek Bridge.

AND/OR COMMON

Meriden Rock Creek Bridge.

2 LOCATION

STREET & NUMBER

SE 1/4 NE 1/4 SE 1/4 NE 1/4 S7 T10S R17E

NOT FOR PUBLICATION

CITY, TOWN

Meriden

X VICINITY OF

CONGRESSIONAL DISTRICT

#2 Jeffries

STATE

Kansas

CODE

20

COUNTY

Jefferson

CODE

087

3 CLASSIFICATION

CATEGORY

DISTRICT

BUILDING(S)

X STRUCTURE

SITE

OBJECT

OWNERSHIP

X PUBLIC

PRIVATE

BOTH

PUBLIC ACQUISITION

IN PROCESS

BEING CONSIDERED

STATUS

X OCCUPIED

UNOCCUPIED

WORK IN PROGRESS

ACCESSIBLE

YES: RESTRICTED

X YES: UNRESTRICTED

NO

PRESENT USE

AGRICULTURE

COMMERCIAL

EDUCATIONAL

ENTERTAINMENT

GOVERNMENT

INDUSTRIAL

MILITARY

MUSEUM

PARK

PRIVATE RESIDENCE

RELIGIOUS

SCIENTIFIC

X TRANSPORTATION

OTHER:

4 OWNER OF PROPERTY

NAME

Jefferson County

STREET & NUMBER

Courthouse

CITY, TOWN

Oskaloosa

VICINITY OF

STATE

Kansas

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE

REGISTRY OF DEEDS, ETC. Register of Deeds

STREET & NUMBER

Jefferson County Courthouse

CITY, TOWN

Oskaloosa

STATE

Kansas

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

Structural Inventory and Appraisal.

DATE

April 18, 1979

FEDERAL STATE X COUNTY LOCAL

DEPOSITORY FOR

SURVEY RECORDS Office of County Engineer - Jefferson County Courthouse

CITY, TOWN

Oskaloosa

STATE

Kansas

DESCRIPTION

CONDITION

☐ EXCELLENT
☐ GOOD
☒ FAIR

☐ DETERIORATED
☐ RUINS
☐ UNEXPOSED

CHECK ONE

☐ UNALTERED
☒ ALTERED

CHECK ONE

☐ ORIGINAL SITE
☐ MOVED

HAER No. KS-2
Page 3

DATE _____

*Unknown

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The bowstring arch, pony truss, bridge is located in the SE $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$, S7, T10S, R17E, in Jefferson County, Kansas. It is $\frac{1}{2}$ mile north and one mile east of Meriden, Kansas.

Each main arch consists of two wrought iron or steel sections that are attached in the center by the use of a metal plate. The wearing surface is timber. Beneath the timber are nine "I" beams running the length of the bridge and resting on the abutments. The south abutment is constructed of stone. In recent years, concrete was added as a base. The north abutment is constructed of concrete. The concrete at the north abutment is severely cracked and the north bearing devices have been displaced.

With a maximum span length of 53 feet, the total structure length is 53.3 feet. The width of the roadway from curb to curb is 13.9 feet. The distance from the bridge deck to low water level is 14 feet. The maximum span height above the bridge deck is four feet.

The exact origin of the bridge is unknown, hence it is impossible to describe the original appearance. There have been changes to the abutments. Pipes that cross the river are attached to the bridge.

SIGNIFICANCE

HAER No. KS-2
Page 4

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY: PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 0-1499	<input type="checkbox"/> ARCHEOLOGY: HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input checked="" type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input checked="" type="checkbox"/> TRANSPORTATION
<input type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES Unknown BUILDER/ARCHITECT Unknown

STATEMENT OF SIGNIFICANCE

The bowstring arch-truss bridge was first patented by Squire Whipple, a famous bridge engineer, in the 1840's. It was further developed by many others for smaller roads. The design is essentially an arch bridge with the deck suspended from the top chord. By so doing, all verticals are placed in tension while horizontal thrust, exerted by the arch is resisted by the lower chord. As a result, this lower chord is also placed in tension.

Detailed historical information relative to the Rock Creek bridge near Meriden has proved elusive. It was constructed on what is historically known as the Ozawie and Mt. Florence Road. On October 5, 1869 the Board of County Commissioners appointed William Gish, Andy Blevins and James Saunders as "road viewers" and charged them with the responsibility to lay out the road. Their survey and plat was accepted and the road established on December 7, 1869. Commencing at the "Iron Bridge" at the town of Ozawie, followed a westerly route through the county.

Records of the County Commissioners indicate that bridges were being constructed on Rock Creek in late April and early May of 1871, although the exact location was unspecified. Gibbons and Brothers were supplying the lumber while Miller and Jamison and Company supplied the iron work. No records of Miller and Jamison were located. The Lawrence City Directory for 1871 does list a W. W. Jamison, Civil Engineer. No connection has been made with the aforementioned company.

Beginning in 1879, and continuing through the 1880's, the county commissioners supported the construction of "Iron" bridges throughout the county. Many of these bridges were constructed over Rock Creek. Unfortunately, records do not indicate the exact location of each particular bridge. Plans and specifications, reported to be on file with the County Clerk by the Journals of the County Commission, are no longer available.

A majority of the bridges constructed in Jefferson County during the 1880's were built by the Missouri Valley Bridge Company of Leavenworth [also known during the period as Insley and Shire and Company and the Missouri Valley Bridge and Iron Works]. For many years, this company's chief engineer was A. J. Tullock whose name appears several times in the commission records.

In April of 1890 the county also paid \$2,190 to the Z. King Bridge Company of Cleveland, Ohio for "iron bridges" purchased from that company. The King company was a major 19th century bridge manufacturer. They received a patent for a bowstring arch on July 30, 1867. An example of their type of construction is currently located at the historical park in Oskaloosa. It consists of curved steel plates riveted to a central frame to form the main arches.

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HAER No. KS-2

DATE ENTERED

Page 5

CONTINUATION SHEET

ITEM NUMBER 8

PAGE 1

Records and plans of the Missouri Valley Bridge and Iron Works, on file with the manuscript department of the Kansas State Historical Society contain a drawing of a bowstring arch-truss planned for Hoovers Creek in Jefferson county. Although there are subtle differences between it and the Rock Creek bridge, the similarity of design is apparent. The major difference appears to be the angles at the panel points.

With available information it is impossible to determine the exact date of construction or the name of the builder.

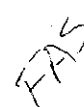
The bowstring arch truss bridge type played an important role in the history of engineering and transportation. Of the thousands constructed in the United States in the 19th century few survive to the present day. As there were several variations of the type, it is imperative that records of these types be preserved.

Item Number 9 -- continued

"Osawkee and Mt. Florence Road." Report of William Gish, Andy Blevins and James Saunders to the County Commission, December 7, 1869. Located at Jefferson County Courthouse, Oskaloosa, Kansas.

Cook, Flatt, and Strobels, Engineers. "Structural Inventory and Appraisal." Located at Jefferson County Courthouse, Oskaloosa, Kansas.

Comp, Allan T. and Jackson, Donald. Bridge Truss Types. American Association for State and Local History Technical Leaflet #95. Nashville, Tennessee, May 1977.



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ch
ridge

LEGEND

ROADS AND ROADWAY FEATURES

PRIMITIVE ROAD
UNIMPROVED ROAD
GRADED AND DRAINED ROAD
SOIL SURFACE ROAD
GRAVEL OR STONE ROAD
NOT GRADED OR DRAINED
GRAVEL OR STONE ROAD
GRADED AND DRAINED
GRAVEL OR STONE ROAD WITH
STABILIZED SURFACE
BETUMINOUS ROAD-LOW TYPE
PAVED ROAD
DIVIDED HIGHWAY
HIGHWAY WITH FULL CONTROL OF
ACCESS AND INTERCHANGE

Revised: 11/11/2011

[illegible]

— 22 —

GENERAL HIGHWAY MAP
JEFFERSON COUNTY
KANSAS

STATE HIGHWAY COMMISSION OF KANSAS
DEPARTMENT OF PLANNING AND DEVELOPMENT
C. B. DEPARTMENT OF TRANSPORTATION
1520 S. W. 10TH AVENUE

22